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ABSTRACT OF THE INVENTION

The present invention uses wire bonding technology to bond
5 interconnect materials that oxidize easily by using a wire with stable oxidation
qualities. A passivation layer is formed on the semiconductor substrate to
encapsulate the bonding pad made from the interconnect material such that the
wire bonds with the passivation layer itself, not with the interconnect material.
10 The passivation layer is selected to be a material that is metallurgically stable
when bonded to the interconnect material. Since the wire is stable compared
with the interconnect material, *i.e.*, it does not readily corrode, a reliable
mechanical and electrical connection is provided between the semiconductor
device (interconnect material) and the wire, with the passivation layer disposed
therebetween.